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Electromagnetic Spectrum Performance Measurement Plan

By Thomas Kidd - [October-December 2007](#)

In the last issue of CHIPS we discussed the Department of the Navy's (DON) Electromagnetic Spectrum Campaign Plan, which focuses on the importance of the electromagnetic spectrum. "Spectrum," as identified in the campaign plan, enables a multitude of capabilities within the Marine Corps and the Navy, many of which are vital and critical to mission success and safety. The Spectrum Campaign Plan establishes goals and supporting objectives that represent a holistic approach to maintaining Marine Corps and Navy access to spectrum, while ensuring the DON makes efficient and effective use of this critical finite resource.

Five broad goals within the campaign plan address a range of issues including: technology and transformation; federal, national and international spectrum policies; spectrum-related administrative actions; DON and the other services' spectrum publications, directives and policy; and personnel training and spectrum tools. Each objective of the campaign plan is included in a Spectrum Performance Measurement Plan (PMP).

The PMP gauges progress and ensures coordinated efforts by the DON and the other services to achieve the Spectrum Campaign Plan goals. The PMP is a living document that is updated according to guidance and other resources to address new tasks as they arise. Ultimately, the PMP enables a continuous cycle of improvement within the DON. For example, the Department must enhance the accuracy of spectrum data to achieve more efficient and effective use of the spectrum. However, increasing data accuracy for more than 20,000 frequency assignments is a monumental task that can only be accomplished by balancing available resources with DON objectives.

The following provides a sampling of tasks from the PMP and a brief explanation of their importance to the DON.

Task 1.1. Matrix DoD RFID policy with DON, USMC and USN policy.

The use of radio frequency identification within the Navy and Marine Corps continues to increase; RFID is now used for various purposes within the DON. In addition to the capabilities RFID provides naval logistics, RFID has potential benefits to nearly all occupational fields. As such, DON policy must not only support RFID capabilities, but must also ensure operations are implemented to minimize radio frequency interference.

Task 1.2. Conduct the Secretary of the Navy Lean Six Sigma project: Spectrum supportability for equipment flowing to theater.

This initiative ensures rapidly procured spectrum-dependent equipment is fielded with sufficient technical information to avoid unknown or detrimental effects to existing equipment operating within the U.S. Central Command's area of responsibility which includes 2525 nations, ranging from Egypt in the west to Pakistan in the east, from Kazakhstan in the north to Kenya and the Horn of Africa in the south. This project is planned for completion in February 2008.

To increase the efficient use of the spectrum, the National Telecommunications and Information Administration (NTIA) has mandated that all federal land mobile radio (LMR) systems within the United States and its possessions, including those used by the Marine Corps and Navy, must transition from wideband operations (2525 kilohertz) to narrowband (12.5 kHz) before 2008. The naval services have made significant progress; however, like other federal organizations, the Marine Corps and Navy will not be fully compliant by the end of the year. This task will ensure that waivers for all naval wideband (noncompliant) LMR systems are submitted. It will ultimately ensure continued, uninterrupted operation of DON LMR systems during the Department's narrowband migration.

Task 2.1. Identify all DoD, federal, national and international policy and guidance that address spectrum supportability.

The DON acquisition community has a daunting task to procure spectrum-dependent equipment that enables naval capabilities throughout the world. In doing so, they must conform to policies that

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mandate a plethora of standards and procedures. This task is intended to identify all spectrum policy and guidance. It will ultimately enable the strategic alignment of spectrum-related requirements levied on the acquisition community to ensure those requirements are realistic and attainable.

Task 2.2. Develop a comprehensive matrix of all World Radiocommunication Conference 2007 (WRC-07) and international bilateral meetings for 2007.

The Marine Corps and Navy have global responsibilities. DON advocacy within international forums influences the development of international spectrum policy that protects and benefits naval capabilities.

Task 2.3. Develop a comprehensive matrix of DON assessments, engineering analyses, position papers, advisories and updates in support of WRC-07.

The DON CIO advocates the interests of the DON and ensures awareness of WRC-07 preparations and potential outcomes. The DON has originated and distributed a number of documents, including assessments and memoranda that address issues of significance from WRC-07. These documents have been critical to the development of U.S. positions that protect and enhance global Marine Corps and Navy capabilities.

Task 2.4. Develop a comprehensive matrix of all agreements regarding spectrum use between the DoD, federal government, Mexico and Canada.

Marine Corps and Navy training within the continental United States routinely occurs along the Mexican and Canadian borders. Similar to the DON's participation in multinational spectrum forums, the advocacy of the DON position in DoD and federal bilateral spectrum negotiations with Mexico and Canada is essential.

Providing global spectrum access to deployed naval forces for training or operations is an unending, immense challenge that requires collaborated and coordinated efforts throughout the DON. Completion of all tasks in the DON's Electromagnetic Spectrum Performance Measurement Plan may not ensure worldwide spectrum access for the Marine Corps and the Navy, but it will ensure that Department, Marine Corps and Navy spectrum personnel will work together in the best spectrum interests of the naval services.

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TAGS: [Spectrum](#), [Telecommunications](#), [Wireless](#)

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